APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/901,501	07/09/2001	WeiLoon Ng	STL9708	4907

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	EXAMINER
	PATEL, HETUL B

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1280 Disc Drive - SHK2LG
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ART UNIT	PAPER NUMBER
2186	

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Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/901,501	NG ET AL.
	Examiner	Art Unit
	Hetul Patel	2186

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>03</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>09 July 2001</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-18</u> is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-18</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>09 July 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
      application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date <u>03</u>.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1.   Claims 1-18 are presented for examination.

2.   The specification has not been checked to the extent necessary to determine the

presence of all possible minor errors. Applicant's cooperation is requested in correcting

any errors of which applicant may become aware of in the specification.

Double Patenting

3.   A rejection based on double patenting of the "same invention" type finds its
support in the language of 35 U.S.C. 101 which states that "whoever invents or
discovers any new and useful process ... may obtain a̲ patent therefor ..." (Emphasis
added). Thus, the term "same invention," in this context, means an invention drawn to
identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re
Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164
USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by
canceling or amending the conflicting claims so they are no longer coextensive in
scope. The filing of a terminal disclaimer c̲a̲n̲n̲o̲t̲ overcome a double patenting rejection
based upon 35 U.S.C. 101.

4.   Claims 1-8 and 10-18 are provisionally rejected under 35 U.S.C. 101 as claiming

the same invention as that of claims 1-8 and 10-18 of copending Application No.

10/046,625. This is a p̲r̲o̲v̲i̲s̲i̲o̲n̲a̲l̲ double patenting rejection since the conflicting claims

have not in fact been patented.

5.   Claim 9 of copending Application No. 10/046,625 contains every element of claim

9 of the instant application and as such anticipates claim 9 of the instant application.

"A later patent claim is not patentably distinct from an earlier patent claim if the later claim is obvious over, or **anticipated by**, the earlier claim. In re Longi, 759 F.2d at 896, 225 USPQ at 651 (affirming a holding of obviousness-type double patenting because the claims at issue were obvious over claims in four prior art patents); In re Berg, 140 F.3d at 1437, 46 USPQ2d at 1233 (Fed. Cir. 1998) (affirming a holding of obviousness-type double patenting where a patent application claim to a genus is anticipated by a patent claim to a species within that genus). " ELI LILLY AND COMPANY v BARR LABORATORIES, INC., United States Court of Appeals for the Federal Circuit, ON PETITION FOR REHEARING EN BANC (DECIDED: May 30, 2001).

Claim Rejections - 35 USC § 102

6.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7.   Claims 10-11 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Chang (USPN: 5,367,682).

As per Claim 10, Chang teaches a system for maintaining information relating to partitions in disc drives associated with a computer, the system comprising:

- at least one disc drive (e.g., Figure I; Abstract);

- firmware controlling the initialization of the computer and its peripheral devices (e.g., Figures 1 and 3: ROM); and

- instructions installed on the firmware which are executed upon detection of invalid partition information (e.g., Column 3, line 32 to Column 4, line 40), the instructions redirecting the system to seek valid partition information (e.g., redundant partition table).

As per Claim 11, Chang teaches the claimed invention as described above and furthermore, Chang teaches a system, wherein the disc drive is divided into one or more partitions, each partition containing partition information which relates to the use of sectors within that partition and the location of at least one other partition which is located elsewhere on the disc drive (e.g., Column 3, line 25 to Column 4, line 40).

As per Claim 16, Chang teaches a disc drive comprising:

- a disc (e.g., Figure I; Abstract);

- a set of partition information describing usage allocation on the disc (e.g., Column 3, lines 25-54); and

- means for maintaining the set of partition information (e.g., virus protection system; redundant partition table; Column 3, line 33 to Column 4, line 40).

8.   Claims 16-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Sobel
(USPN: 6,205,558).

  As per claim 16, Sobel teaches a disc drive comprising:

  - a disc (e.g., Figure 6; Column 3, lines 20-28);

  - a set of partition information describing usage allocation on the disc (e.g.,

    Column 3, lines 29-53); and

  - means for maintaining the set of partition information (e.g., "recovery

    program", copy of the Master Boot Record: Column 3 line 54 to Column 6,

    line 45).

  As per Claim 17, Sobel teaches the claimed invention as described above and
furthermore, Sobel teaches a disc drive, wherein at least one backup copy of the set of
partition information is retained in the disc drive (e.g., Column 3, line 53 to Column 4,
line 57).

  As per Claim 18, Sobel teaches the claimed invention as described above and
furthermore, Sobel teaches a disc drive in which the means for maintaining the partition
information further includes a set of executable set of instructions to replace the set of
partition information with the one or more backup copies (e.g., Column 3, line 53 to
Column 6, line 45).

9.   Claims 10-11, 13-14 and 16-18 are rejected under 35 U.S.C. 102(e) as being
anticipated by Berstis et al. (USPN: 6,560,701) hereinafter, Berstis.

As per Claim 10, Berstis teaches a system for maintaining information relating to partitions in disc drives associated with a computer, the system comprising:

- at least one disc drive (e.g., Figure 2: element 220);

- firmware controlling the initialization of the computer and its peripheral devices (e.g., Figure 2: element 206; Column 4, lines 14-25); and

- instructions installed on the firmware which are executed upon detection of invalid partition information, the instructions redirecting the system to seek valid partition information (e.g., Column 7, line 46 to Column 8, line 65).

As per Claim 11, Berstis teaches the claimed invention as described above and furthermore, Berstis teaches a system, wherein the disk drive is divided into one or more partitions, each partition containing partition information which relates to the use of sectors within that partition and the location of at least one other partition which is located elsewhere on the disc drive (e.g., Figure 3A and 3B).

As per Claim 13, Berstis teaches the claimed invention as described above and furthermore, Berstis teaches a system, wherein the firmware controlling the initialization of the computer executes Basic Input/Output System (BIOS) software (e.g., Figure 2: "BIOS"; Column 7, line 46 to Column 8, line 65).

As per Claim 14, Berstis teaches the claimed invention as described above and furthermore, Berstis teaches a system, wherein the BIOS contains instructions for determining the validity of partition information which is located in the first sector of each partition in the disk drive (e.g., Column 5, line 30 to Column 8, line 65).

As per Claim 16, Berstis teaches the claimed invention as described above and furthermore, Berstis teaches a disc drive comprising:

- a disc (e.g., Figure 2, element 220);

- a set of partition information describing usage allocation on the disc (e.g., Figure 3); and

- means for maintaining the set of partition information (e.g., Figure 4A, 4B, and 5).

As per Claim 17, Berstis teaches the claimed invention as described above and furthermore, Berstis teaches a disc drive, wherein at least one backup copy of the set of partition information is retained in the disc drive (e.g., Figure 3A: ABR, "Alternate Boot Record").

As per Claim 18, Berstis teaches the claimed invention as described above and furthermore, Berstis teaches a disc drive in which the means for maintaining the partition information further includes a set of executable set of instructions to replace the set of partition information with the one or more backup copies (e.g., Column 7, line 46 to Column 9, line 49).

Claim Rejections - 35 USC § 103

10.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11.   Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berstis

in view of Stancil (USPN: 6,112,303).

As per Claim 12, Berstis teaches utilizing a Read only Memory (ROM) for controlling

the initialization of the computer, but does not specifically teach utilizing a

Programmable Read Only Memory (PROM) for controlling the initialization of the

computer. However, Stancil teaches the concept of utilizing a Programmable Read Only

Memory for storing the BIOS code for controlling the initialization of the computer (e.g.,

Abstract). Furthermore, Stancil teaches that the while flash memory technology has

enabled flash ROM to achieve higher densities; "the cost of flash ROM has remained

relatively high based on memory capacity" (e.g., Column 1, fne6l to Column 2, line 2).

Stancil also teaches that "there are ongoing initiatives to dramatically reduce BIOS code

in size" and that "the use of relatively expensive flash ROM with its increased densities

are no longer desirable or cost efficient" (e.g., Column 2, lines 3-15). Stancil also notes

that "given the addressing and mapping entailed in communicating with the flash ROM,

flash ROM is thus accessed randomly by the memory controller during boot-up.

However random accesses to ROM are generally not favored, due to the lack of rapid

implementation" (e.g., Column 2, lines 63-67). Thus, Stancil teaches the concept of a

PROM for storing BIOS code for the desirability of allowing for the entire serial PROM to

be read in one read operation eliminating random accesses to the PROM" (e.g., Column

3, lines 10-25).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time

the invention was made to combine to modify the teachings of Berstis to incorporate the

teachings of Stancil in utilizing a PROM for controlling the initialization of the computer

since the PROM as taught by Stancil eliminates the unfavorable random accesses that

occur in ROM communications during boot up. Furthermore, one would be motivated to

utilize a PROM in place of a ROM because a PROM presents a cost-effective design

approach in initializing the computer as compared to the relative expensive flash ROM.

12.   Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chang

in view of Stancil.

As per Claim 12, Chang teaches utilizing a Read only Memory (ROM) for controlling

the initialization of the computer, but does not specifically teach utilizing a

Programmable Read Only Memory (PROM) for controlling the initialization of the

computer. However, Stancil teaches the concept of utilizing a Programmable Read Only

Memory for storing the BIOS code for controlling the initialization of the computer (e.g.,

Abstract). Furthermore, Stancil teaches that the while flash memory technology has

enabled flash ROM to achieve higher densities; "the cost of flash ROM has remained

relatively high based on memory capacity" (e.g., Column 1, line61 to Column 2, line 2).

Stancil also teaches that "there are ongoing initiatives to dramatically reduce BIOS code

in size" and that "the use of relatively expensive flash ROM with its increased densities

are no longer desirable or cost efficient" (e.g., Column 2, lines 3-15). Stancil also notes

that "given the addressing and mapping entailed in communicating with the flash ROM,

flash ROM is thus accessed randomly by the memory controller during boot-up.

However random accesses to ROM are generally not favored, due to the lack of rapid

implementation" (e.g., Column 2, lines 63-67). Thus, Stancil teaches the concept of a

PROM for storing BIOS code for the desirability of allowing for the entire serial PROM to

be read in one read operation eliminating random accesses to the PROM" (e.g., Column

3, lines 10-25).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time

the invention was made to modify the teachings of Chang to incorporate the teachings

of Stancil in utilizing a PROM for controlling the initialization of the computer since the

PROM as taught by Stancil, eliminates the unfavorable random accesses that occur in

ROM communications during boot up. Furthermore, one would be motivated to utilize a

PROM in place of a ROM because a PROM presents a cost-effective design approach

in initializing the computer as compared to the relative expensive flash ROM.


Conclusion

The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Hetul Patel whose telephone number is (703) 305-6219.

The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Matt Kim can be reached on (703) 305-3821. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

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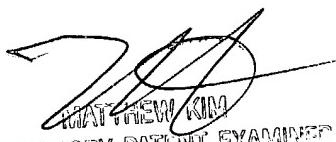
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